

SAFETY DATA SHEET

Section 1. Identification

Product identifier : 4025331463009
Product name : Spies Hecker Permahyd Hi-TEC WT357 Micro Silver
Date of issue : 18 April 2023
Version : 14.08

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Coating component.
Uses advised against : Not for sale to or use by consumers.

Supplier's details : Axalta Coating Systems Australia Pty Limited
16 Darling Street, Marsden Park, NSW 2765, Australia
Product information : +61 (0)2 8818 4300 <http://www.axalta.com.au>

Emergency telephone number : Poisons Information Center: 131 126; Emergency Phone Transport: 1800 089 766

Section 2. Hazard(s) identification

Classified as **HAZARDOUS** according to the GHS criteria under Australian Work Health Safety (WHS) Act 2011.
Not classified as **DANGEROUS GOODS** according to the Australian Dangerous Goods (ADG).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1

GHS label elements

Hazard pictograms :



Signal word : **DANGER**
Hazard statements : **H226 - Flammable liquid and vapour.**
H318 - Causes serious eye damage.

Precautionary statements

Prevention : P280 - Wear eye or face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Response : P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor.
Storage : Not applicable.
Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements : Not applicable.

Section 2. Hazard(s) identification

Other hazards which do not result in classification : None known.

Section 3. Composition and ingredient information

Substance/mixture : Mixture

Ingredient name	% (w/w)	CAS number
propan-1-ol	5 - <10	71-23-8
1-methoxy-2-propanol	3 - <5	107-98-2
Isopropyl alcohol	3 - <5	67-63-0
1-pentanol	3 - <5	71-41-0

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

The total concentration of ingredients in this product, reported or not in this section, is 100%.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Section 4. First aid measures

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Section 5. Firefighting measures

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store between the following temperatures: 5 to 35°C (41 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
propan-1-ol	Safe Work Australia (Australia, 12/2019). Absorbed through skin. STEL: 614 mg/m ³ 15 minutes. STEL: 250 ppm 15 minutes. TWA: 492 mg/m ³ 8 hours. TWA: 200 ppm 8 hours.
1-methoxy-2-propanol	Safe Work Australia (Australia, 12/2019). STEL: 553 mg/m ³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 369 mg/m ³ 8 hours. TWA: 100 ppm 8 hours.
Isopropyl alcohol	Safe Work Australia (Australia, 12/2019). STEL: 1230 mg/m ³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 983 mg/m ³ 8 hours. TWA: 400 ppm 8 hours.
1-pentanol	DFG MAC-values list (Germany, 10/2021). PEAK: 146 mg/m ³ , 4 times per shift, 15 minutes. PEAK: 40 ppm, 4 times per shift, 15 minutes. TWA: 73 mg/m ³ 8 hours. TWA: 20 ppm 8 hours.

Biological exposure indices

No exposure indices known.

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls and personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Colour** : Silver.
- Odour** : Not available.
- Odour threshold** : Not available.
- pH** : 7.5 to 8.5
- Melting point** : Not applicable.
- Boiling point** : 82 to 100.1°C (179.6 to 212.2°F)
- Flash point** : Closed cup: 37°C (98.6°F) [Product does not sustain combustion.]
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 2.1%
Upper: 13.7%
- Vapour pressure** : 2.4 kPa (17.9 mm Hg)
- Vapour density** : Not available.
- Density** : 1.045 g/cm³

Section 9. Physical and chemical properties

Solubility(ies)	:	Not available.
Partition coefficient: n-octanol/water	:	Not applicable.
Auto-ignition temperature	:	270°C (518°F)
Decomposition temperature	:	Not applicable.
Viscosity	:	Dynamic: >148 mPa·s (>148 cP) Kinematic: >142 mm ² /s (>142 cSt)
Flow time (ISO 2431)	:	Not available.

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	:	Reactive or incompatible with the following materials: oxidising materials
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
propan-1-ol	LD50 Dermal	Rabbit	5040 mg/kg	-
	LD50 Oral	Rat	2200 mg/kg	-
1-methoxy-2-propanol	LD50 Dermal	Rabbit	13 g/kg	-
	LD50 Oral	Rat	6600 mg/kg	-
Isopropyl alcohol	LC50 Inhalation Vapour	Rat - Male, Female	37.5 mg/l	4 hours
	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
propan-1-ol	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Skin - Mild irritant	Human	-	47 hours 100 %	-
	Skin - Mild irritant	Human	-	24 hours 100 %	-
1-methoxy-2-propanol	Skin - Mild irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
Isopropyl alcohol	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 uL	-
	Eyes - Severe irritant	Rabbit	-	81 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Skin - Severe irritant	Rabbit	-	24 hours 3200 mg	-
1-pentanol					

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
propan-1-ol	Category 3	-	Narcotic effects
1-methoxy-2-propanol	Category 3	-	Narcotic effects
Isopropyl alcohol	Category 3	-	Narcotic effects
1-pentanol	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure : Not available.

Potential acute health effects

Section 11. Toxicological information

Eye contact	: Causes serious eye damage.
Inhalation	: No known significant effects or critical hazards.
Skin contact	: No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Adverse symptoms may include the following: pain watering redness
Inhalation	: No specific data.
Skin contact	: Adverse symptoms may include the following: pain or irritation redness blistering may occur
Ingestion	: Adverse symptoms may include the following: stomach pains

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects	: Not available.
Potential delayed effects	: Not available.

Long term exposure

Potential immediate effects	: Not available.
Potential delayed effects	: Not available.

Potential chronic health effects

Not available.

General	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Inhalation (vapours)	255.81 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
propan-1-ol	Acute EC50 4480000 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute LC50 1000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 2950000 µg/l Fresh water	Daphnia - Daphnia pulex	48 hours
1-methoxy-2-propanol	Acute LC50 3800000 µg/l Marine water	Fish - Alburnus alburnus	96 hours
	Acute LC50 >21100 mg/l	Daphnia	48 hours
Isopropyl alcohol	Acute LC50 ≥1000 mg/l	Fish	96 hours
	Acute EC50 7550 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
1-pentanol	Acute LC50 1400000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours
	Acute EC50 714 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 180000 µg/l Marine water	Fish - Menidia beryllina	96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
1-methoxy-2-propanol	OECD 301E	96 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
1-methoxy-2-propanol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
propan-1-ol	0.2	-	low
1-methoxy-2-propanol	<1	-	low
Isopropyl alcohol	0.05	-	low
1-pentanol	1.51	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid

Section 13. Disposal considerations

dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	ADG	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.

Hazchem code : Not available.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

The actual shipping description for this product may vary based several factors including, but not limited to, the volume of material, size of the container, mode of transport and use of exemptions or exceptions found in the applicable regulations. The information provided in Section 14 is one possible shipping description for this product. Consult your shipping specialist or supplier for appropriate assignment information.

Section 15. Regulatory information

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

Section 16. Any other relevant information

History

Date of issue : 18 April 2023

Key to abbreviations :

- ACGIH = Association Advancing Occupational and Environmental Health
- ADG = Australian Dangerous Goods
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- DFG = Deutsche Forschungsgemeinschaft, German research funding organization
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MAK value = Maximum Permissible Concentration

Section 16. Any other relevant information

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

STEL = Short-Term Exposure Limit

TLV = Threshold Limit Value

TWA = Time-Weighted Average

Indicates information that has changed from previously issued version.

Notice to reader

This product is intended for industrial use only.

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